

Name _____ Period _____


When you are multiplying you are really taking groups of things. For example $8 \cdot 5$ is really 8 groups of 5.

$$8 \cdot 5 = \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} + \begin{array}{cccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array} = 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40$$

When you multiply fractions it is the same thing. For example $\frac{1}{2} \cdot 5$ is really a half of a group of 5.

$$\frac{1}{2} \cdot 5 = \begin{array}{c} \bullet \quad \bullet \\ \bullet \quad \bullet \end{array} = 2\frac{1}{2} = \frac{5}{2}$$

1-4 For each verbal expression, write a numerical expression, draw a model of what the expression represents, and write what it equals.

Verbal Expression	Numerical Expression	Model	Answer
Ex 1. $\frac{1}{3}$ of six =	$\frac{1}{3} \cdot 6$		2
1. $\frac{1}{4}$ of four	_____	_____	_____
2. $\frac{1}{5}$ of ten	_____	_____	_____
3. $\frac{1}{2}$ of six	_____	_____	_____
4. $\frac{1}{3}$ of nine	_____	_____	_____

5-10 Multiply the following fractions together. Draw a model.

5. $\frac{2}{3} \cdot 6 =$ _____

6. $\frac{3}{4} \cdot 4 =$ _____

7. $\frac{4}{5} \cdot 10 =$ _____

8. $\frac{1}{2} \cdot 6 =$ _____

9. $\frac{2}{3} \cdot 9 =$ _____

10. $\frac{7}{10} \cdot 10 =$ _____

11-18 Multiply the following fractions together.

Ex 2. $\frac{1}{3} \cdot \frac{9}{2} = \frac{9}{6} = \frac{3}{2}$

11. $\frac{1}{4} \cdot \frac{4}{3}$

12. $\frac{1}{6} \cdot \frac{8}{5}$

13. $\frac{2}{3} \cdot \frac{8}{5}$

14. $\frac{3}{4} \cdot \frac{8}{5}$

15. $\frac{8}{9} \cdot \frac{2}{3}$

16. $\frac{5}{7} \cdot \frac{7}{5}$

17. $\frac{4}{3} \cdot \frac{1}{8}$

18. $\frac{3}{5} \cdot \frac{10}{3}$